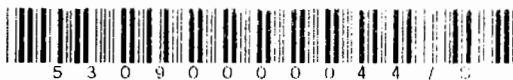


U.S. ENVIRONMENTAL PROTECTION AGENCY

AGENCY USE ONLY

PREMANUFACTURE
NOTICE

CES

When
completed
send this
form to

Company Sanitized

2000 NOV 13 PM 3:17

Enter the total number of pages
in the Premanufacture Notice

18

Document control number

53090000044

EPA case number

L-09-44

GENERAL INSTRUCTIONS

TS - K 2 T 3 1 8

- You must provide all information requested in this form to the extent that it is known to or reasonably ascertainable by you. Make reasonable estimates if you do not have actual data.
- Before you complete this form, you should read the "Instructions Manual for Premanufacture Notification" (the Instructions Manual is available from the Toxic Substances Control Act (TSCA) Information Service by calling 202-554-1404, or faxing 202-554-5603).
- If a user fee has been remitted for this notice (40 CFR 700.45), indicate in the boxes above the TS-user fee identification number you have generated. Remember, your user fee ID number must also appear on your corresponding fee remittance, which is sent to EPA, Washington Financial Management Center (3303), P.O. 360399M, Pittsburgh, PA 15251-6399, Attn. TSCA User fee.

Part I — GENERAL INFORMATION

You must provide the currently correct Chemical Abstracts (CA) Name of the new chemical substance, even if you claim the identity as confidential. You may authorize another person to submit chemical identity information for you, but your submission will not be complete and the review will not begin until EPA receives this information. A letter in support of your submission should reference your TS user fee identification number. You must submit an original and two copies of this notice including all test data. If you claimed any information as confidential, a single sanitized copy must also be submitted.

Part II — HUMAN EXPOSURE AND ENVIRONMENTAL RELEASE

If there are several manufacture, processing, or use operations to be described in Part II, sections A and B of this notice, reproduce the sections as needed.

Part III — LIST OF ATTACHMENTS

Attach additional sheets if there is not enough space to answer a question fully. Label each continuation sheet with the corresponding section heading. In Part III, list these attachments, any test data or other data and any optional information included in the notice.

OPTIONAL INFORMATION

You may include any information that you want EPA to consider in evaluating the new substance. On page 11 of this form, space has been provided for you to describe pollution prevention and recycling information you may have regarding the new substance.

So-called "binding" boxes are included throughout this form for you to indicate your willingness to be bound to certain statements you make in this section, such as use, production volume, protective equipment . . . This option is intended to reduce delays that routinely accompany the development of consent orders or Significant New Use Rules. Except in the case of exemption applications (such as TMEA, LVE, LOREX) where certain information provided in such notification is binding on the submitter when the Agency approves the exemption application, checking a binding box in this notice does not by itself prohibit the submitter from later deviating from the information (except chemical identity) reported in the form.

CONFIDENTIALITY CLAIMS

You may claim any information in this notice as confidential. To assert a claim on the form, mark (X) the confidentiality box next to the information that you claim as confidential. To assert a claim in an attachment, circle or bracket the information you claim as confidential. If you claim information in the notices as confidential, you must also provide a sanitized version of the notice, (including attachments). For additional instructions on claiming information as confidential, read the Instructions Manual.

☒ Mark (x) if any information in this notice is claimed as confidential.

TEST DATA AND OTHER DATA

You are required to submit all test data in your possession or control and to provide a description of all other data known to or reasonably ascertainable by you, if these data are related to the health and environmental effects on the manufacture, processing, distribution in commerce, use, or disposal of the new chemical substance. Standard literature citations may be submitted for data in the open scientific literature. Complete test data (written in English), not summaries of data, must be submitted if they do not appear in the open literature. You should clearly identify whether test data is on the substance or on an analog. Also, the chemical composition of the tested material should be characterized. Following are examples of test data and other data. Data should be submitted according to the requirements of §720.50 of the Premanufacture Notification Rule (40 CFR Part 720).

Test Data (Check Below any included in this notice)

- | | | | |
|---------------------------------|---|---|------------------------------|
| • Environmental fate data | <input type="checkbox"/> Yes | • Other data | <input type="checkbox"/> Yes |
| • Health effects data | <input type="checkbox"/> Yes | Risk assessments | <input type="checkbox"/> |
| • Environmental effects data | <input type="checkbox"/> Yes | Structure/activity relationships | <input type="checkbox"/> |
| • Physical/Chemical Properties* | <input checked="" type="checkbox"/> Yes | Test data not in the possession or control of the submitter | <input type="checkbox"/> |

* A physical and chemical properties worksheet is located on the last page of this form.

TYPE OF NOTICE

(Check Only One)

- | | |
|-------------------------------------|--|
| <input type="checkbox"/> | PMN (Premanufacture Notice) |
| <input type="checkbox"/> | INTERMEDIATE PMN (submitted in sequence with final product PMN) |
| <input type="checkbox"/> | SNUN (Significant New Use Notice) |
| <input type="checkbox"/> | TMEA (Test Marketing Exemption Application) |
| <input checked="" type="checkbox"/> | LVE (Low Volume Exemption) @ 40 CFR 723.50(c)(1) |
| <input type="checkbox"/> | LOREX (Low Release/Low Exposure Exemption) @ 40 CFR 723.50(c)(2) |
| <input type="checkbox"/> | LVE Modification <input type="checkbox"/> LOREX Modification |

IS THIS A CONSOLIDATED PMN? ☐ Yes

of chemicals or polymers 1
(Prenotice Communication # required, enter # on page 3)

Public reporting burden for this collection of information is estimated to average 110 hours per response, including time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding the burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Director, Collection Strategies Division (2822), U.S. Environmental Protection Agency, 1200 Pennsylvania Ave., N.W., Washington, D.C. 20460; and to the Office of Management and Budget, Paperwork Reduction Act (2070-0012), Washington, D.C. 20503.

CERTIFICATION -- A Printed copy of this signature page, with original signature, must be submitted

I certify that to the best of my knowledge and belief:

1. The company named in Part I, section A, subsection 1a of this notice form intends to manufacture or import for a commercial purpose, other than in small quantities solely for research and development, the substance identified in Part I, Section B.
2. All information provided in this notice is complete and truthful as of the date of submission.
3. I am submitting with this notice all test data in my possession or control and a description of all other data known to or reasonably ascertainable by me as required by §720.50 of the Premanufacture Notification Rule.

Additional Certification Statements:

If you are submitting a PMN, Intermediate PMN, Consolidated PMN, or SNUN, check the following **user fee** certification statement that applies:

- ☐ The Company named in Part I, Section A has remitted the fee of \$2500 specified in 40 CFR 700.45(b), or
- ☐ The Company named in Part I, Section A has remitted the fee of \$1000 for an Intermediate PMN (defined @ 40 CFR 700.43) in accordance with 40 CFR 700.45(b), or
- ☐ The Company named in Part I Section A is a small business concern under 40 CFR 700.43 and has remitted a fee of \$100 in accordance with 40 CFR 700.45(b).

If you are submitting a **low volume exemption (LVE)** application in accordance with 40 CFR 723.50(c)(1) or a **Low release and low exposure exemption (LoRex)** application in accordance with 40 CFR 723.50(c)(2), check the following certification statements:

- ☒ The manufacturer submitting this notice intends to manufacture or import the new chemical substance for commercial purposes, other than in small quantities solely for research and development, under the terms of 40 CFR 723.50.
- ☒ The manufacturer is familiar with the terms of this section and will comply with those terms; and
- ☒ The new chemical substance for which the notice is submitted meets all applicable exemption conditions.
- ☒ If this application is for an LVE in accordance with 40 CFR 723.50(c)(1), the manufacturer intends to commence manufacture of the exempted substance for commercial purposes within 1 year of the date of the expiration of the 30 day review period.

The accuracy of the statements you make in this notice should reflect your best prediction of the anticipated facts regarding the chemical substance described herein. Any knowing and willful misinterpretation is subject to criminal penalty pursuant to 18 USC 1001.

		Confidential
Signature and title of Authorized Official (Original Signature Required)	Date	<input checked="" type="checkbox"/>
Signature of agent - (if applicable)	Date	<input type="checkbox"/>

Part I -- GENERAL INFORMATION

Section A -- SUBMITTER IDENTIFICATION

Confidential

Mark () the "Confidential" box next to any subsection you claim as confidential

1a. Person Submitting Notice (in U.S.)	Name of authorized official		Position	<input checked="" type="checkbox"/>
	Company			
	Mailing address (number and street)			
	City, State	Postal Code		
b. Agent (if applicable)	Name of authorized official		Position	<input type="checkbox"/>
	Company			
	Mailing address (number and street)			
	City, State	Postal Code	Telephone (include area code)	
c. If you are submitting this notice as part of a joint submission, mark (X) this box. <input type="checkbox"/>				
Joint Submitter (if applicable)	Name of authorized official		Position	<input type="checkbox"/>
	Company			
	Mailing address (number and street)			
	City, State			
	Province, Country	Postal Code	Telephone (include country or area code)	
2. Technical Contact (in U.S.)	Name of authorized official		Position	<input checked="" type="checkbox"/>
	Company			
	Mailing address (number and street)			
	City, State	Postal Code	Telephone (include area code)	
3. If you have had a prenotice communication (PC) concerning this notice and EPA assigned a PC Number to the notice, enter the number. <input type="text"/>		Mark (X) if none <input type="checkbox"/>	<input checked="" type="checkbox"/>	
4. If you previously submitted an exemption application for the chemical substance covered by this notice, enter the exemption number assigned by EPA. If you previously submitted a PMN for this substance enter the PMN number assigned by EPA (i.e. withdrawn or incomplete). <input type="text"/>		Mark (X) if none <input type="checkbox"/>	<input checked="" type="checkbox"/>	
5. If you have submitted a notice of Bona fide intent to manufacture or import for the chemical substance covered by this notice, enter the notice number assigned by EPA. <input type="text"/>		Mark (X) if none <input type="checkbox"/>	<input checked="" type="checkbox"/>	
6. Type of Notice - Mark (X)				
1. <input type="checkbox"/> Manufacture Only		2. <input checked="" type="checkbox"/> Import Only		3. <input type="checkbox"/> Both
<input type="checkbox"/> Binding Option Mark (X)		<input type="checkbox"/> Binding Option Mark (X)		

Part I -- GENERAL INFORMATION -- Continued**Section B -- CHEMICAL IDENTITY INFORMATION:**

You must provide a currently correct Chemical Abstracts (CA) name of the substance based on the ninth Collective Index (9CI) of CA nomenclature rules and conventions.

Mark (X) the "Confidential" box next to any item you claim as confidential

Complete either item 1 (Class 1 or 2 substances) or 2 (Polymers) as appropriate. Complete all other items.

If another person will submit chemical identity information for you (for either Item 1 or 2), mark (X) the box at the right. Identify the name, company, and address of that person in a continuation sheet. ☐

Confidential

1. Class 1 or 2 chemical substances (for definitions of class 1 and class 2 substances, see the Instructions Manual)

a. Class of substance - Mark (X) ☐

Class 1

or ☐

Class 2

☒

b. Chemical name (Currently correct Chemical Abstracts (CA) Name that is consistent with TSCA Inventory listings for similar substances. For Class 1 substances a CA Index Name must be provided. For Class 2 substances either a CA Index Name or CA Preferred Name must be provided, which ever is appropriate based on CA 9CI nomenclature rules and conventions).

☒

c. Please identify which method you used to develop or obtain the specified chemical identity information reported in this notice: (check one).



Method 1 (CAS Inventory Expert Service - a copy of the Identification report obtained from the CAS Inventory Expert Services must be submitted as an attachment to this notice)



Method 2 (Other Source)

d. Molecular formula

CBI

CAS Registry Number
(if a number already
exists for the substance)☒

e. For a class 1 substance, provide a complete and correct chemical structure diagram. For a class 2 substance, provide a correct representative or partial chemical structure diagram, as complete as can be known, if one can be reasonably ascertained. Please see the E-PMN Instruction Manual for discussion of "native format" diagram software which can be helpful in reviewing your substance.

☒

Mark (X) this box if you attach a continuation sheet.

For a class 2 substance - (1) List the immediate precursor substances with their respective CAS Registry Numbers. (2) Describe the nature of the reaction or process. (3) Indicate the range of composition and the typical composition (where appropriate).

e. (1) List the immediate precursor substances with their respective CAS Registry Numbers.
Name (CAS #)

Confidential

☐

e. (2) Describe the nature of the reaction or process.

☐

e. (3) Indicate the range of composition and the typical composition (where appropriate).

☐

☐ Mark (X) this box if you attach a continuation sheet.

Part I -- GENERAL INFORMATION -- Continued

Section B -- CHEMICAL IDENTITY INFORMATION -- Continued

2. Polymers (For a definition of polymer, see the Instructions Manual.)

Confidential

- a. Indicate the number-average weight of the lowest molecular weight composition of the polymer you intend to manufacture. Indicate maximum weight percent of low molecular weight species (not including residual monomers, reactants, or solvents) below 500 and below 1,000 absolute molecular weight of that composition.

Describe the methods of measurement or the basis for your estimates: GPC ☐ Other ☐ : (Specify below)(i) lowest number average molecular weight: (ii) maximum weight % below 500 molecular weight: (iii) maximum weight % below 1000 molecular weight: ☐ Mark (X) this box if you attach a continuation sheet.

- b. You must make separate confidentiality claims for monomer or other reactant identity, composition information, and residual information. Mark (X) the "Confidential" box next to any item you claim as confidential
- (1) - Provide the specific chemical name and CAS Registry Number (if a number exists) of each monomer or other reactant used in the manufacture of the polymer.
 - (2) - Mark (X) this column if entry in column (1) is confidential.
 - (3) - Indicate the typical weight percent of each monomer or other reactant in the polymer.
 - (4) - Choose "yes" from drop down menu if you want a monomer or other reactant used at two weight percent or less to be listed as part of the polymer description on the TSCA Chemical Substance Inventory.
 - (5) - Mark (X) this column if entries in columns (3) and (4) are confidential.
 - (6) - Indicate the maximum weight percent of each monomer or other reactant that may be present as a residual in the polymer as manufactured for commercial purposes.
 - (7) - Mark (X) this column if entry in column (6) is confidential.

Monomer or other reactant and CAS Registry Number (1)	Confidential (2)	Typical composition (3)	Include in identity (4)	Confidential (5)	Maximum residual (6)	Confidential (7)
	<input type="checkbox"/>	%	<input type="checkbox"/>	<input type="checkbox"/>	%	<input type="checkbox"/>
	<input type="checkbox"/>	%	<input type="checkbox"/>	<input type="checkbox"/>	%	<input type="checkbox"/>
	<input type="checkbox"/>	%	<input type="checkbox"/>	<input type="checkbox"/>	%	<input type="checkbox"/>
	<input type="checkbox"/>	%	<input type="checkbox"/>	<input type="checkbox"/>	%	<input type="checkbox"/>
	<input type="checkbox"/>	%	<input type="checkbox"/>	<input type="checkbox"/>	%	<input type="checkbox"/>
	<input type="checkbox"/>	%	<input type="checkbox"/>	<input type="checkbox"/>	%	<input type="checkbox"/>
	<input type="checkbox"/>	%	<input type="checkbox"/>	<input type="checkbox"/>	%	<input type="checkbox"/>
	<input type="checkbox"/>	%	<input type="checkbox"/>	<input type="checkbox"/>	%	<input type="checkbox"/>
	<input type="checkbox"/>	%	<input type="checkbox"/>	<input type="checkbox"/>	%	<input type="checkbox"/>
	<input type="checkbox"/>	%	<input type="checkbox"/>	<input type="checkbox"/>	%	<input type="checkbox"/>
	<input type="checkbox"/>	%	<input type="checkbox"/>	<input type="checkbox"/>	%	<input type="checkbox"/>
	<input type="checkbox"/>	%	<input type="checkbox"/>	<input type="checkbox"/>	%	<input type="checkbox"/>
	<input type="checkbox"/>	%	<input type="checkbox"/>	<input type="checkbox"/>	%	<input type="checkbox"/>
	<input type="checkbox"/>	%	<input type="checkbox"/>	<input type="checkbox"/>	%	<input type="checkbox"/>

☐ Mark (X) this box if you attach a continuation sheet.

<p>c. Please identify which method you used to develop or obtain the specified chemical identity information reported in this notice (check one). <input type="checkbox"/> Method 1 (CAS Inventory Expert Service - a copy of the identification report obtained from CAS Inventory Expert Service must be submitted as an attachment to this notice) <input type="checkbox"/> Method 2 (other source)</p>	<p>CBI</p> <input type="checkbox"/>
<p>d. The currently correct Chemical Abstracts (CA) name for the polymer that is consistent with TSCA Inventory listings for similar polymers.</p> <div style="background-color: #cccccc; height: 100px; width: 100%;"></div>	<input type="checkbox"/>
<p>CAS Registry Number (if a number already exists for the substance)</p> <div style="background-color: #cccccc; height: 20px; width: 100%;"></div>	<input type="checkbox"/>
<p>e. Provide a correct representative or partial chemical structure diagram, as complete as can be known, if one can be reasonably ascertained. . Please see the E-PMN Instruction Manual for discussion of "native format" diagram software which can be helpful in reviewing your substance.</p>	<input type="checkbox"/>
<div style="background-color: #cccccc; height: 50px; width: 100%;"></div> <div style="height: 500px;"></div>	
<input type="checkbox"/> Mark (X) this box if you attach a continuation sheet.	

Part I -- GENERAL INFORMATION -- Continued**Section B -- CHEMICAL IDENTITY INFORMATION -- Continued****3. Impurities**

- (a) - Identify each impurity that may be reasonably anticipated to be present in the chemical substance as manufactured for commercial purpose. Provide the CAS Registry Number if available. If there are unidentified impurities, enter "unidentified."
- (b) - Estimate the maximum weight % of each impurity. If there are unidentified impurities, estimate their total weight %.

Impurity and CAS Registry Number (a)	Maximum percent (b)	Confidential
	%	<input checked="" type="checkbox"/>
	%	<input type="checkbox"/>
	%	<input type="checkbox"/>
	%	<input type="checkbox"/>
	%	<input type="checkbox"/>
	%	<input type="checkbox"/>
	%	<input type="checkbox"/>

☐ Mark (X) this box if you attach a continuation sheet.

4. Synonyms - Enter any chemical synonyms for the new chemical identified in subsection 1 or 2.

Confidential
☐

☐ Mark (X) this box if you attach a continuation sheet.

5. Trade identification - List trade names for the new chemical substance identified in subsection 1 or 2.

☒

☐ Mark (X) this box if you attach a continuation sheet.

6. Generic chemical name - If you claim chemical identity as confidential, you must provide a generic name for your substance that reveals the specific chemical identity of the new chemical substance to the maximum extent possible. Refer to the TSCA Chemical Substance Inventory, 1985 Edition, Appendix B for guidance on developing generic names.

Triazatriphosphrine

☐ Mark (X) this box if you attach a continuation sheet.

7. Byproducts - Describe any byproducts resulting from the manufacture, processing, use, or disposal of the new chemical substance. Provide the CAS Registry Number if available.

Byproduct (1)	CAS Registry Number (2)	Confidential
		<input type="checkbox"/>
		<input type="checkbox"/>
		<input type="checkbox"/>
		<input type="checkbox"/>

☐ Mark (X) this box if you attach a continuation sheet.

Company Sanitized

Part I -- GENERAL INFORMATION -- Continued**Section C -- PRODUCTION, IMPORT, AND USE INFORMATION:**

Mark (X) the "Confidential" box next to any item you claim as confidential.

- 1. Production volume** -- Estimate the **maximum** production volume during the first 12 months of production. Also estimate the maximum production volume for any consecutive 12-month period during the first three years of production. Estimates should be on 100% new chemical substance basis. For a Low Volume Exemption application, if you choose to have your notice reviewed at a lower production volume than 10,000 kg/yr, specify the volume and mark (x) in the binding box. If granted, you are bound to this volume

Maximum first 12-month production (kg/yr) (100% new chemical substance basis)	Maximum 12-month production (kg/yr) (100% new chemical substance basis)	Confidential	Binding Option Mark (x)
		<input checked="" type="checkbox"/>	<input type="checkbox"/>

- 2. Use Information** -- You must make separate confidentiality claims for the description of the category of use, the percent of production volume devoted to each category, the formulation of the new substance, and other use information. Mark (X) the "Confidential" Box next to any item you claim as confidential.
- a. (1) --Describe each intended category of use of the new chemical substance by function and application. (2) --Mark (X) this column if entry column (1) is confidential business information (CBI). (3) --Indicate your willingness to have the information provided in column (1) binding. (4) --Estimate the percent of total production for the first three years devoted to each category of use. (5) --Mark (X) this column if entry in column (4) is confidential business information (CBI). (6) --Estimate the percent of the new substance as formulated in mixtures, suspensions, emulsions, solutions, or gels as manufactured for commercial purposes at sites under your control associated with each category of use. (7) --Mark (X) this column if entry in column (6) is confidential business information (CBI). (8) --Indicate % of product volume expected for the listed "use" sectors. Mark more than one box if appropriate. Mark (X) to indicate your willingness to have the use type provided in (8) binding. (9) --Mark (X) this column if entry(ies) in column (8) is (are) confidential business information (CBI).

Category of use (1) (by function and application i.e. a dispersive dye for finishing polyester fibers)	CBI (2)	Binding Option Mark (X) (3)	Prod- uction % (4)	CBI (5)	% in Formu- lation (6)	CBI (7)	% of substance expected per use (8)					CBI (9)
							Site- limited	Cons- umer	Indus- trial	Com- mercial	Binding Option	
	<input checked="" type="checkbox"/>	<input type="checkbox"/>	%	<input checked="" type="checkbox"/>	%	<input checked="" type="checkbox"/>					<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	<input type="checkbox"/>	%	<input type="checkbox"/>	%	<input type="checkbox"/>					<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	<input type="checkbox"/>	%	<input type="checkbox"/>	%	<input type="checkbox"/>					<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	<input type="checkbox"/>	%	<input type="checkbox"/>	%	<input type="checkbox"/>					<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	<input type="checkbox"/>	%	<input type="checkbox"/>	%	<input type="checkbox"/>					<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	<input type="checkbox"/>	%	<input type="checkbox"/>	%	<input type="checkbox"/>					<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	<input type="checkbox"/>	%	<input type="checkbox"/>	%	<input type="checkbox"/>					<input type="checkbox"/>	<input type="checkbox"/>

* If you have identified a "consumer" use, please provide on a continuation sheet a detailed description of the use(s) of this chemical substance in consumer products. In addition include estimates of the concentration of the new chemical substance as expected in consumer products and describe the chemical reactions by which this substance loses its identity in the consumer product.

☐ Mark (X) this box if you attach a continuation sheet.

b. Generic use description If you claim any category of use description in subsection 2a as confidential, enter a generic description of that category. Read the Instruction Manual for examples of generic use descriptions.

Flame Retardant

☐ Mark (X) this box if you attach a continuation sheet.

3. Hazard Information -- Include in the notice a copy of reasonable facsimile of any hazard warning statement, label, material safety data sheet, or other information which will be provided to any person who is reasonably likely to be exposed to this substance regarding protective equipment or practices for the safe handling, transport, use, or disposal of the new substance. List in part III hazard information you include.

☒ Mark (X) this box if you attach hazard information.

Binding
Option
Mark (x)

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Part II-- HUMAN EXPOSURE AND ENVIRONMENTAL RELEASE**Section A -- INDUSTRIAL SITES CONTROLLED BY THE SUBMITTER**

Mark (X) the "Confidential" box next to any item you claim as confidential

Complete section A for each type of manufacture, processing, or use operation involving the new chemical substance at industrial sites you control. Importers do not have to complete this section for operations outside the U.S.; however, you may still have reporting requirements if there are further industrial processing or use operations after import. You must describe these operations. See instructions manual

1. Operation description

Confidential

a. Identity -- Enter the identity of the site at which the operation will occur.

Name

Site address (number and street)

City, County, State, ZIP code

If the same operation will occur at more than one site, enter the number of sites. Identify the additional sites on a continuation sheet, and if any of the sites have significantly different production rates or operations, include all the information requested in this section for those sites as attachments.

☐

Mark (X) this box if you attach a continuation sheet.

b. Type --

Mark (X)

☐

Manufacturing

☐

Processing

☐

Use

c. Amount and Duration -- Complete 1 or 2 as appropriate**1. Batch**

Maximum kg/batch (100% new chemical substance)

Hours/batch

Batches/year

2. Continuous

Maximum kg/day (100% new chemical substance)

Hours/day

Days/year

d. Process description☐

Mark (X) to indicate your willingness to have your process description binding.

- (1) Diagram the major unit operation steps and chemical conversions. Include interim storage and transport containers (specify- e.g. 5 gallon pails, 55 gallon drum, rail car, tank truck, etc.).
- (2) Provide the identity, the approximate weight (by kg/day or kg/batch on a 100% new chemical substance basis), and entry point of all starting materials and feedstocks (including reactants, solvents, catalysts, etc.), and of all products, recycle streams, and wastes. Include cleaning chemicals (note frequency if not used daily or per batch.).
- (3) Identify by number the points of release, including small or intermittent releases, to the environment of the new chemical substance. If releasing to two media at the same step, assign a second release number for the second medium.

☐

Mark (X) this box if you attach a continuation sheet.

Confidential

☐

2. Occupational Exposure -- You must make separate confidentiality claims for the description of worker activity, physical form of the new chemical substance, number of works exposed, and duration of activity. Mark (X) the "Confidential" box next to any item you claim as confidential.

- (1) -- Describe the activities (i.e. bag dumping, tote filling, unloading drums, sampling, cleaning, etc.) in which workers may be exposed to the substance.
- (2) -- Mark (X) this column if entry in column (1) is confidential business information (CBI).
- (3) -- Describe any protective equipment and engineering controls used to protect workers.
- (4) and (6) -- Indicate your willingness to have the information provided in column (3) or (5) binding.
- (5) -- Indicate the physical form(s) of the new chemical substance (e.g., solid: crystal, granule, powder, or dust) and % new chemical substance (if part of a mixture) at the time of exposure.
- (7) -- Mark (X) this column if entry in column (5) is confidential business information (CBI).
- (8) -- Estimate the maximum number of workers involved in each activity for all sites combined.
- (9) -- Mark (X) this column if entry in column (8) is confidential business information (CBI).
- (10) and (11) -- Estimate the maximum duration of the activity for any worker in hours per day and days per year.
- (12) -- Mark (X) this column if entries in columns (10) and (11) are confidential business information (CBI).

[illegible]

Page 9

3. Environmental Release and Disposal -- You must make separate confidentiality claims for the release number and the amount of the new chemical substance released and other release and disposal information. Mark (X) the "Confidential" box next to each item you claim as confidential.

(1) -- Enter the number of each release point identified in the process description, part II, section A, subsection 1d(3).

(2) -- Estimate the amount of the new substance released (a) directly to the environment or (b) into control technology (in kg/day or kg/batch).

(3) -- Mark (X) this column if entries in columns (1) and (2) are confidential business information (CBI).

(4) -- Identify the media (stack air, fugitive air (optional-see Instruction Manual), surface water, on-site or off-site land or incineration, POTW, or other (specify)) to which the new substance will be released from that release point.

(5) -- a. Describe control technology, if any, and control efficiency that will be used to limit the release of the new substance to the environment. For releases disposed of on land, characterize the disposal method and state whether it is approved for disposal of RCRA hazardous waste. On a continuation sheet, for each site describe any additional disposal methods that will be used and whether the waste is subject to secondary or tertiary on-site treatment. b. Estimate the amount released to the environment after control technology (in kg/day).

(6) -- Mark (X) this column if entries in columns (4) and (5) are confidential business information (CBI).

(7) -- Identify the destination(s) of releases to water. Please supply NPDES (National Pollutant Discharge Elimination System) numbers for direct discharges or NPDES numbers of the POTW (Publicly Owned Treatment Works). Mark (X) if the POTW name or NPDES # is confidential business information (CBI).

[illegible]

(7) Mark (X) the destination(s) of releases to water.

NPDES #

CBI

<input type="checkbox"/> POTW--provide name(s)			<input type="checkbox"/>
<input type="checkbox"/> Navigable waterway--provide name(s)			<input type="checkbox"/>
<input type="checkbox"/> Other--Specify			<input type="checkbox"/>
<input type="checkbox"/> Mark (X) this box if you attach a continuation sheet.			

Part II-- HUMAN EXPOSURE AND ENVIRONMENTAL RELEASE -- Continued**Section B -- INDUSTRIAL SITES CONTROLLED BY OTHERS**

Complete section B for typical processing or use operations involving the new chemical substance at sites you do not control. Importers do not have to complete this section for operations outside the U.S.; however, you must report any processing or use activities after import. See the Instructions Manual. *Complete a separate section B for each type of processing, or use operation involving the new chemical substance.* If the same operation is performed at more than one site describe the typical operation common to these sites. Identify additional sites on a continuation sheet.

1(a). Operation Description -- To claim information in this section as confidential, circle or bracket the specific information that you claim as confidential.

(1) -- Diagram the major unit operation steps and chemical conversions, including interim storage and transport containers (specify - e.g. 5 gallon pails, 55 gallon drums, rail cars, tank trucks, etc). On the diagram, identify by letter and briefly describe each worker activity. (2) -- Either in the diagram or in the text field 1(b) below, provide the identity, the approximate weight (by kg/day or kg/batch, on an 100% new chemical substance basis), and entry point of all feedstocks (including reactants, solvents and catalysts, etc) and all products, recycle streams, and wastes. Include cleaning chemicals (note frequency if not used daily or per batch). (3) -- Either in the diagram or in the text field 1(b) below, identify by number the points of release, including small or intermittent releases, to the environment of the new chemical substance. (4) Please enter the # of sites (remember to identify the locations of these sites on a continuation sheet):

■ _____
of sites

CBI



1(b). (Optional) This space is for a text description to clarify the diagram above.


☐

Mark (X) this box if you attach a continuation sheet.

2. Worker Exposure/Environmental Release

- (1) -- From the diagram above, provide the letter for each worker activity. Complete 2-8 for each worker activity described.
- (2) -- Estimate the number of workers exposed for all sites combined.
- (4) -- Estimate the typical duration of exposure per worker in (a) hours per day and (b) days per year.
- (6) -- Describe physical form of exposure and % new chemical substance (if in mixture), and any protective equipment and engineering controls, if any, used to protect workers.
- (7) -- Estimate the percent of the new substance as formulated when packaged or used as a final product.
- (9) -- From the process diagram above, enter the number of each release point. Complete 9-13 for each release point identified.
- (10) -- Estimate the amount of the new substance released (a) directly to the environment or (b) into control technology to the environment (in kg/day or kg/batch).
- (12) -- Describe media of release i.e. stack air, fugitive air (optional-see Instructions Manual), surface water, on-site or off-site land or incineration, POTW, or other (specify) and control technology, if any, that will be used to limit the release of the new substance to the environment.
- (14) -- Identify byproducts which may result from the operation.

(3), (5), (8), (11), (13) and (15) -- Mark (X) this column if any of the proceeding entries are confidential business information (CBI).

Letter of Activity (1)	# of Workers Exposed (2)	CBI (3)	Duration Of Exposure		CBI (5)	Protective Equip. /Engineering Controls/Physical Form and/ % new substance (6)	% in Formulation (7)	CBI (8)
			(4a)	(4b)				
		<input type="checkbox"/>			<input type="checkbox"/>			<input type="checkbox"/>
		<input type="checkbox"/>			<input type="checkbox"/>			<input type="checkbox"/>
		<input type="checkbox"/>			<input type="checkbox"/>			<input type="checkbox"/>
		<input type="checkbox"/>			<input type="checkbox"/>			<input type="checkbox"/>
		<input type="checkbox"/>			<input type="checkbox"/>			<input type="checkbox"/>

Release Number (9)	Amount of New Substance Released		CBI (11)	Media of Release & Control Technology (12)	CBI (13)
	(10a)	(10b)			
			<input type="checkbox"/>		<input type="checkbox"/>
			<input type="checkbox"/>		<input type="checkbox"/>
			<input type="checkbox"/>		<input type="checkbox"/>
			<input type="checkbox"/>		<input type="checkbox"/>
			<input type="checkbox"/>		<input type="checkbox"/>

14) -- Byproducts:

(15)

☐ Mark (X) this box if you attach a continuation sheet,

OPTIONAL POLLUTION PREVENTION INFORMATION

To claim information in the following section as confidential circle or bracket the specific information that you claim as confidential.

In this section you may provide information not reported elsewhere in this form regarding your efforts to reduce or minimize potential risks associated with activities surrounding manufacturing, processing, use and disposal of the PMN substance. Please include new information pertinent to pollution prevention, including source reduction, recycling activities and safer processes or products available due to the new chemical substance. Source reduction includes the reduction in the amount or toxicity of chemical wastes by technological modification, process and procedure modification, product reformulation, raw materials substitution, and/or inventory control. Recycling refers to the reclamation of useful chemical components from wastes that would otherwise be treated or released as air emissions or water discharges, or land disposal. Descriptions of pollution prevention, source reduction and recycling should emphasize potential risk reduction subsequent to compliance with existing regulatory requirements and can be either quantitative or qualitative. The EPA is interested in the information to assess overall net reductions in toxicity or environmental releases and exposures, not the shifting of risks to other environmental media or non-environmental areas (e.g., occupational or consumer exposure). In addition, information on the relative cost or performance characteristics of the PMN substance to potential alternatives may be provided.

All information provided in this section will be taken into consideration during the review of this substance. See PMN Instructions Manual and Pollution Prevention Guidance manual for guidance and examples.

Optional Pollution Prevention Information (Continued) Describe the expected net benefits, such as (1) an overall reduction in risk to human health or the environment; (2) a reduction in the volume manufactured; (3) a reduction in the generation of waste materials through recycling, source reduction or other means; (4) a reduction in potential toxicity or human exposure and/or environmental release; (5) an increase in product performance, a decrease in the cost of production and/or improved operation efficiency of the new chemical substance in comparison to existing chemical substances used in similar application; or (6) the extent to which the new chemical substance may be a substitute for an existing substance that poses a greater overall risk to human health or the environment.

CBI



☐ Mark (X) this box if you attach a continuation sheet.

Part III -- LIST OF ATTACHMENTS
--

Attach continuation sheets for sections of the form and test data and other data (including physical/chemical properties and structure/activity information), and optional information after this page. Clearly identify the attachment and the section of the form to which it relates, if appropriate. Number consecutively the pages of any paper attachments. In the column below, enter the inclusive page numbers of each attachment. Electronic attachments can be identified by filename.

Mark (X) the "Confidential" box next to any attachment name you claim as confidential. Read the Instructions Manual for guidance on how to claim any information in an attachment as confidential. You must include with the sanitized copy of the notice form a sanitized version of any attachment in which you claim information as confidential.

#	Attachment name	Attachment Filename	Attachment page number(s)	Confidential
---	-----------------	---------------------	---------------------------	--------------

[illegible]

☐ Mark (X) this box if you attach a continuation sheet. Enter the attachment name and number.

PHYSICAL AND CHEMICAL PROPERTIES WORKSHEET

To assist EPA's review of physical and chemical properties data, please complete the following worksheet for data you provide and include it in the notice. Identify the property measured, the page of the notice on which the property appears, the value of the property, the units in which the property is measured (as necessary), and whether or not the property is claimed as confidential. If the attachments are electronic, give the attachment number (found on page 12) at (b). The physical state of the neat substance should be provided. These measured properties should be for the neat (100% pure) chemical substance. Properties that are measured for mixtures or formulations should be so noted (% PMN substance in ____). You are not required to submit this worksheet; however, EPA strongly recommends that you do so, as it will simplify review and ensure that confidential information is properly protected. You should submit this worksheet as a supplement to your submission of test data. This worksheet is not a substitute for submission of test data.

Property (a)	Mark (X) if provided	Page number (b)	Value (c)	Measured or Estimate (M or E)	Confidential Mark (X) (d)
Physical state of neat substance	<input type="checkbox"/>		<input type="checkbox"/> (s) <input type="checkbox"/> (l) <input type="checkbox"/> (g)		<input type="checkbox"/>
Vapor pressure @ Temperature _____ °C	<input type="checkbox"/>		_____ Torr		<input type="checkbox"/>
Density/relative density	<input type="checkbox"/>		_____ g/cm ³		<input checked="" type="checkbox"/>
Solubility @ Temperature _____ °C Solvent _____	<input type="checkbox"/>		_____ g/L		<input type="checkbox"/>
Solubility in water @ Temperature _____ °C	<input type="checkbox"/>		_____ g/L		<input type="checkbox"/>
Melting temperature	<input type="checkbox"/>		_____ °C		<input type="checkbox"/>
Boiling / sublimation temperature @ _____ torr pressure	<input type="checkbox"/>		_____ °C		<input checked="" type="checkbox"/>
Spectra	<input type="checkbox"/>				<input type="checkbox"/>
Dissociation constant	<input type="checkbox"/>				<input type="checkbox"/>
Particle size distribution	<input type="checkbox"/>				<input type="checkbox"/>
Octanol / water partition coefficient	<input type="checkbox"/>				<input type="checkbox"/>
Henry's Law constant	<input type="checkbox"/>				<input type="checkbox"/>
Volatilization from water	<input type="checkbox"/>				<input type="checkbox"/>
Volatilization from soil	<input type="checkbox"/>				<input type="checkbox"/>
pH @ concentration _____	<input type="checkbox"/>				<input type="checkbox"/>
Flammability	<input type="checkbox"/>				<input type="checkbox"/>
Explosibility	<input type="checkbox"/>				<input type="checkbox"/>
Adsorption / coefficient	<input type="checkbox"/>				<input type="checkbox"/>
Other - Specify	<input type="checkbox"/>				<input checked="" type="checkbox"/>
Other - Specify	<input type="checkbox"/>				<input type="checkbox"/>
<input type="checkbox"/> Mark (X) this box if you attach a continuation sheet. Enter the attachment name and number.					

Focus Report
New Chemicals Program
PMN Number: **L-09-0044**

Focus Date:	03/25/2009 11:00:00 PM	Report Status:	Completed
Consolidated Set:			
Focus Chair:	Loraine Passe	Contractor:	Barbara Fricks

I. Notice Information

Submitter: [REDACTED] CAS Number: [REDACTED]
Chemical Name: [REDACTED]

Use: Flame retardant

Other Uses:

PV-Max:	██████████ Kg/yr	Binding Option:	No
Manufacture:		Import:	X

II. SAT Results

(1) Health Rating: 2-3 **Eco Rating:** 2 **Comments:** ;

Occupational: 0-1 **Non-Occupational:** 3 **Environmental:** 3

(1) PBT:2	1	2	Comments:
------------------	---	---	------------------

III. OTHER FACTORS

Categories:

Health Chemical Category: Ecotox Category:

Related Cases/Regulatory History:

Health related Cases:

Ecotox Related Cases: Analogs: [REDACTED].

Regulatory History: NRC

MSDS/Label Information:[illegible]**Exposure Based Information:**

Exposure Based Review:	N	Exposure Based Review (Health):	N
Exposure Based Review (Eco):	N	Exposure Based (Occupational):	No
Exposure Based Review		Exposure Based (Environmental):	
(Non Occupatuional):			

IV. Summary of SAT Assessment

Fate:

Fate Summary:

L-09-0044
FATE:
Liquid with MP < -50 EC (M)
log Kow = 2.18 (E);
S = [REDACTED]
VP = 15 torr at 25 EC (M)
BP = [REDACTED]
H = 1.10E-8 (E)
log Koc = 3.91 (E)
log Fish BCF = 0.97 (E)
POTW removal (%) = 0-25 via sorption and possible partial biodegradation
Time for complete ultimate aerobic biodeg = wk-mo
Sorption to soils/sediments = strong
PBT Potential: P2B1
*CEB FATE: Migration to ground water = slow

Health:

Health Summary:

Absorption good all routes (pchem). Concern for irritation and possible corrosion to the eye, skin, and lung, based on information in the LVE MSDS. Also concern for acute toxicity, based on test results. Uncertain concern for blood effects, based on [REDACTED]

Test Data:

Submitted with LVE:

Salmonella assay negative with and without activation;
E. coli reverse mutation assay negative with and without activation;
Not a dermal irritant in male rabbits; some edema observed at 1hr in all animals tested, but resolved at 24 hr;
Rat (F) acute oral (gavage) LD50 >50 mg/kg; all animals exposed to higher doses (50 and 300 mg/kg) died, with clonic convulsions, reddish tears, and salivation, while all low-dose animals survived, with no adverse clinical signs

Ecotox:

Ecotox Values:

Fish 96-h LC50:	150(P)
Daphnid 48-h LC50:	86(P)
Green algal 96-h EC50:	44(P)
Fish Chronic Value:	16(P)
Daphnid ChV:	10(P)
Algal ChV:	17(P)

Ecotox values comments: Predictions are based on SARs for neutral organic chemicals; SAR chemical class [REDACTED]
[REDACTED]
active ingredients and nominal concentrations; hardness <180.0 mg/L as CaCO₃; and TOC <2.0 mg/L;

Ecotox Factors:

Assessment Factor:	10
Concern Concentration:	1000

V. Summary of Exposures/Releases

Engineering Summary: L-09-0044

Exposures/Releases	Release	Release	Release
Scenario	Use: [REDACTED]	Use: [REDACTED]	Use: [REDACTED]
Sites	[REDACTED]	[REDACTED]	[REDACTED]
Media	Air	Water or Incineration or Landfill	Air
Descriptor A	Typical	High End	Output 2
Quantity A (kg/site/day)	[REDACTED]	[REDACTED]	[REDACTED]
Frequency A (day/year)	[REDACTED]	[REDACTED]	0
Descriptor B	Worst Case		
Quantity B (kg/site/day)	[REDACTED]		
Frequency B (day/year)	[REDACTED]		
From	[REDACTED]	[REDACTED]	[REDACTED]
Workers			
Exposure Type			

Engineering Summary: Exposures/Releases	Release	Release	
Scenario	Use: [REDACTED]	Use: [REDACTED]	
Sites	[REDACTED]	[REDACTED]	
Media	Water or Incineration or Landfill	Air	
Descriptor A	Conservative	Output 2	
Quantity A (kg/site/day)	[REDACTED]	[REDACTED]	
Frequency A (day/year)	[REDACTED]	[REDACTED]	
Descriptor B			
Quantity B (kg/site/day)			
Frequency B (day/year)			
From	[REDACTED]	[REDACTED]	
Workers			
Exposure Type			

VI. Focus Decision and Rationale

Regulatory Actions

Regulatory Decision: LVE Conditional Denial

Decision Date: 03/25/2009

Type of Decision:

Rationale:

L09-44 was given a conditional denial for acute eco risk and inadequate PPE listed in the MSDS. The submitter must address these concerns in order for the case to be reevaluated. To address potential health concerns the submitter should amend the MSDS to include a NIOSH-approved mist respirator. Acute eco risk resulted from the stream water concentration, 17,400 ppb, exceeding the acute COC of 11,000 ppb from [REDACTED]. The high stream water concentration may have resulted from the unknown site. Unknown sites must be run with the most conservative estimates; therefore, if the submitter provides additional information regarding the unknown sites, a more accurate model estimate can be performed. To address the acute eco risk the submitter must reduce releases to water or provide more site specific information from the unknown site so model estimates can be rerun.

Summary of Exposures/Releases:

Processing/Use:

[REDACTED]

Inhalation: Negligible

Dermal: Not required per SAT

Releases to Water OR Incineration OR Landfill 1: [REDACTED] kg/site/d over [REDACTED] d/yr

Releases to Water OR Incineration OR Landfill 2: [REDACTED] kg/site/d over [REDACTED] d/yr

Releases to Air 1: [REDACTED] /site/d over [REDACTED] /yr

Releases to Air 2: [REDACTED] kg/site/d over [REDACTED] /yr

Summary of Exposures and Releases:

FATE: Releases from Processing/Use (0% Removal Efficiency)

SWC: [REDACTED] ppb

DW: LADD: 1.10E-03 mg/kg/day, ADR: 0.78 mg/kg/day

FISH: LADD: 4.45E-05 mg/kg/day, ADR: 1.78E-02 mg/kg/day

>COC (1000 ppb) 12 of [REDACTED] release days/yr

FUGITIVE: LADD: 2.43E-03 mg/kg/day, ADR: 0.28 mg/kg/day

FATE: Releases from Processing/Use (0% Removal Efficiency)

DW: LADD: 1.38E-03 mg/kg/day

FISH: LADD: 5.58E-05 mg/kg/day

FATE: Releases to Air from Processing/Use

LANDFILL: LADD: 1.05E-04 mg/kg/day

FUGITIVE: LADD: 2.43E-03 mg/kg/day

FATE: Releases from Processing/Use (0% Removal Efficiency)

SWC: [REDACTED] ppb

DW: LADD: 5.47E-04 mg/kg/day, ADR: 0.19 mg/kg/day

FISH: LADD: 2.22E-05 mg/kg/day, ADR: 4.35E-03 mg/kg/day

>COC (2 ppb) 6 of [REDACTED] days/yr

P2 Rec Comments:

Testing:

Final Recommended:

Health:
Eco:
Fate:
Other:

SAT Report

PMN Number: L-09-0044

SAT Date: 11/25/2008

Print Date: 4/9/2015

Related cases:

Health related cases:

Ecotox related cases: Analogs: .

Concern levels:

Type of Concern:	<u>Health</u>	<u>Eco</u>	<u>Comments</u>
Level of Concern:	2-3	2	

<u>Persistence</u>	<u>Bioaccum</u>	<u>Toxicity</u>	<u>Comments</u>
2	1	2	
		Awaiting	
		Human Health	
		Entry	
		Awaiting	
		Human Health	
		Entry	
		Awaiting	
		Human Health	
		Entry	

Exposure Based Review:

Health: No

Ecotox: No

Routes of exposure:

Health: Inhalation, dermal, drinking water

Ecotox: All releases to water

Fate: ;

Keywords:

Keywords:

Summary of Assessment:

Fate:

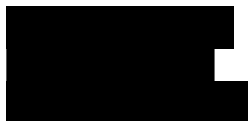
Fate Summary:

FATE:

Liquid with MP <

S = 1.51 g/L at 25 EC (E)

VP = 15 torr at 25 EC (M)



log Fish BCF = 0.97 (E)

POTW removal (%) = 0-25 via sorption and possible partial biodegradation

Time for complete ultimate aerobic biodeg = wk-mo

Sorption to soils/sediments = strong

PBT Potential: P2B1

*CEB FATE: Migration to ground water = slow

Health:

Health Summary: Absorption good all routes (pchem). Concern for irritation and possible corrosion to the eye, skin, and lung, based on information in the LVE MSDS. Also concern for acute toxicity, based on test results. Uncertain concern for blood effects, based on [REDACTED].

Test Data:

Submitted with LVE:

Salmonella assay negative with and without activation;

E. coli reverse mutation assay negative with and without activation;

Not a dermal irritant in male rabbits; some edema observed at 1hr in all animals tested , but resolved at 24 hr;

Rat (F) acute oral (gavage) LD50 >50 mg/kg; all animals exposed to higher doses (50 and 300 mg/kg) died, with clonic convulsions, reddish tears, and salivation, while all low-dose animals survived, with no adverse clinical signs

Ecotox:

Test Organism	Test Type	Test End Point	Predicted	Measured	Comments
fish	96-h	LC50	150		
daphnid	48-h	LC50	86		
green algal	96-h	EC50	44		
fish	—	chronic value	16		
daphnid	—	chronic value	10		
algal	—	chronic value	17		
Sewage Sludge	3-h	EC50	—		
Sewage Sludge	—	Chronic Value	—		

Ecotox Values Comments:

Factors	Values	Comments

Assessment Factor	10	
Concentration of Concern (ppb)	1000	
SARs		
SAR Class		
Ecotox Category		

Ecotox Factors Comments:

SAT Chair: J. Kwiat

INITIAL REVIEW ENGINEERING REPORT

L-09-0044 C

L-09-0044, L-09-0045, L-09-0046

Focus Ready Draft 1/5/2009

ENGINEER: Austin \ AH

PV (kg/yr):

Revision Notes/Assessment Overview:

SUBMITTER: . (submitter)

USE: Flame retardant

OTHER USES:

MSDS: Yes

LABEL: No

CRSS: (12:00:00 AM):

Chemical Name:

S-H₂O: 1.51 g/L @

VP: 1.5E+1 torr @

MW:

Physical State and Misc CRSS Info:

Neat: Liquid Mfg: NK: Import

Proc/Form: NK End Use:

Consumer Use: No

SAT (concerns): (11/25/2008):

Related Cases and Misc SAT Info:

Health rating = 2 (L09-0045-46) // All releases to water with CC = 1,000 (L09-0044), 130 (0045) and 420 ppb (0046). // Migration to groundwater = negligible (L09-0045)

Migration to groundwater:

PBT rating: P2 B1 T2

Health: 2-3, Dermal, Drinking Water, Inhalation

Eco: 2, Water (All releases to water with a CC = 1000ppb)

OCCUPATIONAL EXPOSURE RATING: 0-1

NOTES & KEY ASSUMPTIONS:

Generated by the 06/07/2005 version of ChemSTEER. This is a consolidated case (L09-0044-0046); all cases have the [REDACTED] kg/yr, [REDACTED] SAT concerns. The submitter was contacted for question but she was not available. The LVE is import only, therefore, manufacturing operation was not assessed. The binding option is not marked and all assessments were made at a [REDACTED] kg/yr. The LVE is a volatile liquid and is imported in its [REDACTED] concentration) and [REDACTED]. For releases, CEB assessed releases [REDACTED] based on SAT concerns. Fugitive air releases from volatile liquid were calculated as conservative, however, note direct air releases are unlikely as processes are [REDACTED]. The [REDACTED] [REDACTED]. Therefore, worker exposure is expected to be negligible. No [REDACTED]. Similar use past cases referenced for consistency are [REDACTED]. All past cases were import only (consistent with this IRER). [REDACTED] were referenced for the use rate and days of operation. Both cases assessed releases [REDACTED] (consistent with this IRER). Both cases also assessed dermal exposure to liquid (exposure is not expected for this IRER). [REDACTED].

POLLUTION PREVENTION CONSIDERATIONS:

P2 Claim: [REDACTED]

P2 REC:

EXPOSURE-BASED REVIEW: No (0 criteria met)

L-09-0044 C

L-09-0044, L-09-0045, L-09-0046

Use: [REDACTED]

Number of Sites/Location: [REDACTED] submitter site(s)

unknown site

Basis: Submission indicates [REDACTED] % liquid LVE as imported and [REDACTED] site. Similar use past cases [REDACTED] estimated [REDACTED] days/yr for [REDACTED] use site with a [REDACTED] kg/yr.

Process Description: [REDACTED]

ENVIRONMENTAL RELEASES ESTIMATE SUMMARY

IRER Note: The daily releases listed for any source below may coincide with daily releases from the other sources to the same medium. The submission states that all [REDACTED]

[REDACTED] Due to uncertainty at non-submitter controlled use site, CEB assessed releases to water, incineration or land due to SAT concern for drinking water and inhalation exposure. Fugitive air releases from volatile-liquid are also provided for each activity as conservative, however, LVE vapor is unlikely to be directly released to air.

Air

Typical: [REDACTED]-day over [REDACTED] day/yr from [REDACTED] sites or [REDACTED] kg/yr

to: Air

from: [REDACTED]

basis: [REDACTED]

Water or Incineration or Landfill

High End: [REDACTED] kg/site-day over [REDACTED] day/yr from [REDACTED] sites or [REDACTED] kg/yr

to: uncertain

from: [REDACTED]

basis: [REDACTED]

Air

Output 2: [REDACTED] kg/site-day over [REDACTED] day/yr from [REDACTED] sites or [REDACTED] kg/yr

to: Air

from: [REDACTED]

basis: [REDACTED]

Water or Incineration or Landfill

Conservative: [REDACTED] kg/site-day over [REDACTED] day/yr from [REDACTED] or [REDACTED]/yr

to: uncertain

from: [REDACTED]

basis: [REDACTED]

Air

Output 2: [REDACTED] kg/site-day over [REDACTED] day/yr from [REDACTED] sites or [REDACTED] kg/yr

to: Air

from: [REDACTED]

basis: [REDACTED]

RELEASE TOTAL

kg/yr - all sites

OCCUPATIONAL EXPOSURES ESTIMATE SUMMARY

Tot. # of workers exposed via assessed routes:

Basis:

INITIAL REVIEW EXPOSURE REPORT (IRExR)

Chemical ID: L090044c

Reviewer: Sherer

Results Table: Dose, Concentration, and Days Exceeded Results Summary

Exposure Scenario ¹ Release activity(ies) ² ; exposure calculation(s) ³	Water						Landfill	Stack Air		Fugitive Air	
	Drinking Water		Fish Ingestion		7Q10 CC=1000	PDM Days Exceeded	LADD	ADR	LADD	ADR	LADD
	ADR	LADD	ADR	LADD							
	mg/kg/day	mg/kg/day	mg/kg/day	mg/kg/day	µg/l	# Days	mg/kg/day	mg/kg/day	mg/kg/day	mg/kg/day	mg/kg/day
USE: max ADR, PDM, LADD	5.16E-02	---	9.75E-03	---	1056.70	█	---	---	---	0.28	2.43E-03
USE: max LADD	---	2.72E-04	---	3.05E-05	---	---	1.05E-04	---	---	---	---
USE: max PDM	---	---	---	---	257.73	█	---	---	---	---	---

¹ Exposure scenario titles consist of release activity followed by exposure calculation abbreviation.² Release activities are from engineering report's Manufacturing (Mfg), Processing (Proc) and Use release activity labels.

Multiple release activities are combined in one exposure scenario if their releases occur at same location.

³ Exposure calculations are Acute Dose Rate (ADR), Lifetime Average Daily Dose (LADD), and Probabilistic Dilution Model (PDM). There may be one, two, or all three exposure calculations per exposure scenario. CC is the aquatic concentration of concern.

Remarks:

Fate test recommendations?: (default is NA)

INITIAL REVIEW EXPOSURE REPORT (IRExR)

Summary Table: Endpoints assessed

Endpoints-Assessed Table

Endpoints/Assessment Cycles ¹	Releases Assessed in NCEM2?	Reasons for not assessing releases					
		No XB Testing Required	No Hazard Concern	No Releases	Release Below Acute Threshold ⁵	Release Below Chronic Threshold ⁵	Other
Ingestion							
Surface water	Y	NA			NA	NA	
Ground water (landfill)	Y	NA			NA		
Consumer Use: DtD ²	N	NA		NA	NA	NA	No Consumer use
Inhalation							
Air: incineration (stack)	N	NA			X	X	
Air: fugitive	Y	NA					
Consumer Use: CEM ³	N	NA		NA	NA	NA	No Consumer use
Dermal							
Consumer Use: CEM	N	NA		NA	NA	NA	No Consumer use
Eco							
Surface water: ADR conc and/or PDM ⁴	Y	NA			NA	NA	
Consumer Use: DtD	N	NA		NA	NA	NA	No Consumer use

¹Assessment cycles are endpoint concentrations and dose calculations within the NCEM2 model.

²Down-the-Drain Module

³Consumer Exposure Module

⁴Probabilistic Dilution Model

⁵The threshold values for assessing endpoints are 1 mg/day for acute doses and 1 mg/year for chronic doses.

Remarks:

INITIAL REVIEW EXPOSURE REPORT

Chemical ID: L090044c

Assessor: Sherer

ENVIRONMENTAL RELEASES

Scenario#:1

Number of Release Sites: 1

Release Activity: USE: max ADR, PDM, LADD, max acute eco

Release Description:	WATER	LANDFILL Non-sludge/Sludge	STACK	FUGITIVE
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Total Releases:	1	1	1	1
	(kg/yr)	(kg/yr)	(kg/yr)	(kg/yr)

Non-sludge/Sludge

Release Days/yr:	365	365	365	365
Per Site Release:	1	1	1	1
	(kg/site/day)	(kg/site/day)	(kg/site/day)	(kg/site/day)

Remarks:

INITIAL REVIEW EXPOSURE REPORT

Chemical ID: L090044c

SIC-CODE BASED HUMAN AND AQUATIC EXPOSURES TO SURFACE WATER RELEASES

SCENARIO #: 1

Number of Sites: 1

RELEASE ACTIVITY: USE: max
ADR, PDM, LADD, max acute
eco

SIC-CODE DESCRIPTION: 2820

SIC-CODE (S): 2820

EXPOSED POPULATION: Adult

WWT REMOVAL (%)	RELEASE DAYS	PRETREATMENT RELEASE (kg/site/day)	POSTTREATMENT RELEASE (kg/site/day)	DWT (%)	BCF (L/kg)
100	365	1.0	1.0	100	100

AQUATIC EXPOSURE ESTIMATES - SURFACE WATER

PLANT TYPE	% ILE FACILITY	STREAM FLOW (MLD)				STREAM CONC. (µg/l)			
		Harmonic Mean	30Q5	7Q10	1Q10	Harmonic Mean	30Q5	7Q10	1Q10
ALL	50	288.00	123.84	78.18	66.05	28.47	66.21	104.89	124.15
ALL	10	39.60	13.29	7.76	7.57	207.07	617.01	1056.70	1083.22

DRINKING WATER AND FISH INGESTION EXPOSURE ESTIMATES

Exposure Units	Drinking Water Results		Drinking Water Units	Fish Ingestion Results		Fish Ingestion Units
	50%	10%		50%	10%	
Cancer						
LADD _{pot}	2.98E-05	2.17E-04	mg/kg/day	3.35E-06	2.43E-05	mg/kg/day
LADC _{pot}	1.53E-03	1.11E-02	mg/L	4.01E-02	0.29	mg/kg
Acute						
ADR _{pot}	5.53E-03	5.16E-02	mg/kg/day	1.34E-03	9.75E-03	mg/kg/day

SIC Code Comments:

INITIAL REVIEW EXPOSURE REPORT

Chemical ID: L090044c

SIC CODE EXPOSURES TO SURFACE WATER RELEASES

SCENARIO #: 1

RELEASE ACTIVITY: USE: max ADR, PDM, LADD, max acute eco

SIC CODE DESCRIPTION:

ASSOCIATED SIC CODES:

SIC CODE RESULTS

COC (µg/L)	Percent of Year COC Exceeded	Number of Days COC Exceeded	Release days/year	Loading (kg/site/day)	Waste Water Treatment (%)	High/Avg Analysis
1000.00	2	8				High

INITIAL EXPOSURE REVIEW REPORT

Chemical ID: L090044c

INHALATION EXPOSURE ESTIMATES (POST-TREATMENT)
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SCENARIO #: 1 RELEASE ACTIVITY:USE: max ADR, PDM, LADD, max acute eco

RELEASE DESCRIPTION:

METHOD OF CALCULATION: Screen3

EXPOSED POPULATION: Adult

Number of Sites:

Per Site Fugitive Release:

Fugitive Release Days per Year:

% Removal via Fugitive Release:

Total Fugitive Release:

Max Annual Average Air Concentration
(Fugitive):Max 24 Hour Average Air
Concentration(Fugitive):

Per Site Stack Release:

Stack Release Days per Year:

% Removal via Stack Release:

Total Stack Release:

Max Annual Average Air Concentration (Stack):

Max 24 Hour Average Air Concentration (Stack):

kg/site/day

days

0.00 %

kg/yr

33.00 $\mu\text{g}/\text{m}^3$ $\mu\text{g}/\text{m}^3$

NA kg/site/day

NA days

72.27 %

NA kg/yr

0.00 $\mu\text{g}/\text{m}^3$ 0.00 $\mu\text{g}/\text{m}^3$

Exposure Units	Results (Stack)	Results (Fugitive)	ASSUMPTIONS			
			ED (years)	AT (years)	BW (kg)	Inh. Rate (m³/hr)
Cancer						
LADD _{pot} (mg/kg/day)	N/A	2.43E-03	30.00	75.00	71.80	0.55
LADC _{pot} (mg/m³)	N/A	1.32E-02	30.00	75.00	NA	NA
Acute						
ADR _{pot} (mg/kg/day)	N/A	0.28	NA	1 day	71.80	0.55

Inhalation Comments:

Stack Parameter Data

Stack Height	10.00
Inside Stack Diameter:	0.10
Stack Gas Exit Velocity:	0.10
Stack Gas Temperature:	293.00

Fugitive Parameter Data

Release Height:	3.00	m
Length of Release Opening:	10.00	m
Width of Release Opening:	10.00	m

Meteorological and Terrain Information:

Surrounding Land Use:	Rural	
Terrain Height:	0.00	m
Distance to Residence of Interest:	100.00	m
Meteorological Class:	Full	
Stability Class:	NA	
Wind Speed:	NA	

Downwash Information:

Facility Length:	NA	m
Facility Width:	NA	m
Facility Height:	NA	m

INITIAL REVIEW EXPOSURE REPORT

Chemical ID: L090044c

Assessor:

ENVIRONMENTAL RELEASES

Scenario#:2

Number of Release Sites: 1

Release Activity: USE: max LADD

Release Description:	WATER	LANDFILL Non-sludge/Sludge	STACK	FUGITIVE
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Total Releases:

1	1	1	1	1
(kg/yr)	(kg/yr)	(kg/yr)	(kg/yr)	(kg/yr)

Non-sludge/Sludge

Release Days/yr:

1	1	1	1
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Per Site Release:

1	1	1	1
(kg/site/day)	(kg/site/day)	(kg/site/day)	(kg/site/day)

Remarks:

INITIAL REVIEW EXPOSURE REPORT

Chemical ID: L090044c

SIC-CODE BASED HUMAN AND AQUATIC EXPOSURES TO SURFACE WATER RELEASES

SCENARIO #: 2

Number of Sites: 1

RELEASE ACTIVITY: USE: max
LADD

SIC-CODE DESCRIPTION: 2820 Chemical and Allied products manufacturing

SIC-CODE (S): 2820

EXPOSED POPULATION: Adult

WWT REMOVAL (%)	RELEASE DAYS	PRETREATMENT RELEASE (kg/site/day)	POSTTREATMENT RELEASE (kg/site/day)	DWT (%)	BCF (L/kg)
0.00	1	0.00	0.00	0.00	0.00

AQUATIC EXPOSURE ESTIMATES - SURFACE WATER

PLANT TYPE	% ILE FACILITY	STREAM FLOW (MLD)				STREAM CONC. (µg/l)			
		Harmonic Mean	30Q5	7Q10	1Q10	Harmonic Mean	30Q5	7Q10	1Q10
ALL	50	288.00	123.84	78.18	66.05				
ALL	10	39.60	13.29	7.76	7.57				

DRINKING WATER AND FISH INGESTION EXPOSURE ESTIMATES

Exposure Units	Drinking Water Results		Drinking Water Units	Fish Ingestion Results		Fish Ingestion Units
	50%	10%		50%	10%	
Cancer						
LADD _{pot}	3.74E-05	2.72E-04	mg/kg/day	4.20E-06	3.05E-05	mg/kg/day
LADC _{pot}	1.92E-03	1.39E-02	mg/L	5.02E-02	0.37	mg/kg
Acute						
ADR _{pot}						

SIC Code Comments:

INITIAL REVIEW EXPOSURE REPORT

Chemical ID: L090044c

SIC CODE EXPOSURES TO SURFACE WATER RELEASES

SCENARIO #: 2

RELEASE ACTIVITY: USE: max LADD

SIC CODE DESCRIPTION:

ASSOCIATED SIC CODES:

SIC CODE RESULTS

COC (µg/L)	Percent of Year COC Exceeded	Number of Days COC Exceeded	Release days/year	Loading (kg/site/day)	Waste Water Treatment (%)	High/Avg Analysis
1000.00	0	1			0.00	High

INITIAL EXPOSURE REVIEW REPORT

Chemical ID: L090044c

DRINKING WATER EXPOSURE ESTIMATES FROM LANDFILL RELEASES

SCENARIO #: 2

ACTIVITY: USE: max LADD

RELEASE DESCRIPTION:

EXPOSED POPULATION: Adult

NUMBER OF SITES	NON-SLUDGE LANDFILL RELEASE AND DAYS OF RELEASE (kg/site/day)/(days)	LANDFILLED SLUDGE ¹ AND DAYS OF RELEASE (kg/site/day)/(days)	MIGRATION DESCRIPTOR ²	ADSORPTION TO WASTEWATER SLUDGE (%)	DRINKING WATER TREATMENT (%)
1	1	1	1	1	1

¹ Landfilled sludge equals the fraction adsorbed to wastewater treatment sludge times the surface water pre-treatment release.

Migration Descriptor	Log Koc	Groundwater Concentration (GWC) (mg/L per kg release)
Negligible	no migration	None
Negligible to slow	> 4.5	3.21E-6
Slow	<4.5 to 3.5	2.67E-5
Moderate	<3.5 to 2.5	5.95E-5
Rapid	<2.5	7.55E-5

Exposure Units	Results	ASSUMPTIONS			
		ED (years)	AT (years)	BW (kg)	IR (L/day)
Cancer					
LADD _{pot} (mg/kg/day)	1.05E-04	30.00	75.00	71.80	1.40
LADC _{pot} (mg/L)	5.38E-03	30.00	75.00	NA	NA

REMARKS:

INITIAL REVIEW EXPOSURE REPORT

Chemical ID: L090044c

Assessor:

ENVIRONMENTAL RELEASES

Scenario#:3

Number of Release Sites: 1

Release Activity:

USE: max PDM

Release Description:	WATER	LANDFILL Non-sludge/Sludge	STACK	FUGITIVE
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Total Releases:

1	1	1	1	1
(kg/yr)	(kg/yr)	(kg/yr)	(kg/yr)	(kg/yr)

Non-sludge/Sludge

Release Days/yr:

365	365	365	365
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Per Site Release:

1	1	1	1
(kg/site/day)	(kg/site/day)	(kg/site/day)	(kg/site/day)

Remarks:

INITIAL REVIEW EXPOSURE REPORT

Chemical ID: L090044c

SIC-CODE BASED HUMAN AND AQUATIC EXPOSURES TO SURFACE WATER RELEASES

SCENARIO #: 3

Number of Sites: 1

RELEASE ACTIVITY:USE: max
PDM

SIC-CODE DESCRIPTION: 2820

SIC-CODE (S): 2820

EXPOSED POPULATION: Adult

WWT REMOVAL (%)	RELEASE DAYS	PRETREATMENT RELEASE (kg/site/day)	POSTTREATMENT RELEASE (kg/site/day)	DWT (%)	BCF (L/kg)
100	365	1.0	1.0	100	100

AQUATIC EXPOSURE ESTIMATES - SURFACE WATER									
PLANT TYPE	% ILE FACILITY	STREAM FLOW (MLD)				STREAM CONC. (µg/l)			
		Harmonic Mean	30Q5	7Q10	1Q10	Harmonic Mean	30Q5	7Q10	1Q10
ALL	50	288.00	123.84	78.18	66.05	6.94	16.15	25.58	30.28
ALL	10	39.60	13.29	7.76	7.57	50.51	150.49	257.73	264.20

DRINKING WATER AND FISH INGESTION EXPOSURE ESTIMATES						
Exposure Units	Drinking Water Results		Drinking Water Units	Fish Ingestion Results		Fish Ingestion Units
	50%	10%		50%	10%	
Cancer						
LADD _{pot}	1.48E-05	1.08E-04	mg/kg/day	1.67E-06	1.21E-05	mg/kg/day
LADC _{pot}	7.61E-04	5.53E-03	mg/L	1.99E-02	0.15	mg/kg
Acute						
ADR _{pot}	1.35E-03	1.26E-02	mg/kg/day	3.27E-04	2.38E-03	mg/kg/day

SIC Code Comments:

INITIAL REVIEW EXPOSURE REPORT

Chemical ID: L090044c

SIC CODE EXPOSURES TO SURFACE WATER RELEASES

SCENARIO #: 3

RELEASE ACTIVITY: USE: max PDM

SIC CODE DESCRIPTION:

ASSOCIATED SIC CODES:

SIC CODE RESULTS

COC (µg/L)	Percent of Year COC Exceeded	Number of Days COC Exceeded	Release days/year	Loading (kg/site/day)	Waste Water Treatment (%)	High/Avg Analysis
1000.00	0	1			0.00	High